



THE CITY OF SAN DIEGO MANAGER'S REPORT

DATE ISSUED: September 29, 2000 REPORT NO. 00-198

ATTENTION: Public Safety & Neighborhood Services Committee
Agenda of October 4, 2000

SUBJECT: Emergency Medical Services (EMS) Program
Paramedic System Status Report

SUMMARY

Issues - 1) Should the Public Safety and Neighborhood Services Committee approve the amendment of response time for Unscheduled, Non-Emergency Priority 4 calls from 15 minutes to 25 minutes and amend the City Agreement and Rural/Metro Agreement to reflect this change? 2) Should the Public Safety and Neighborhood Services Committee approve the amendment of the Consumers Price Index (CPI) used to compute maximum average patient charge in the Rural Agreement from the All-Urban Consumers - San Diego, California, as reported by the U.S. Bureau of Labor Statistics to a weighted average of the National All Urban Consumers (CPI-U), Medical Care Component (75%) and the Transportation Component (25%)?

Manager's Recommendation - Direct the Manager to amend the necessary Agreements and implement Level 4 dispatch priority with a 25 minute response time requirement and adjust the CPI to the National CPI-U weighted Medical Care/Transportation.

Other Recommendations - None

Fiscal Impact - None

BACKGROUND

In 1996, the City Council directed the redesign of the City's Emergency Medical Services (EMS) System. This redesign project resulted in a system which was configured to provide optimal EMS service to citizens while establishing fiscal viability to ensure continued service. The EMS design envisioned partnering with managed care organizations as well as a four-level priority system of dispatch to maximize resources. At the onset of the current agreements with the EMS system provider, San Diego Medical Services Enterprise (SDMSE), concentrated its efforts in providing

quality service for the 9-1-1 system, and procurement of managed care contracts for non-emergency medical transportation were not fully initiated until Fiscal Year 2000. In addition, only two levels of priority dispatch were initially utilized in the 9-1-1 system as stipulated by the contracts. The City EMS Medical Director was directed by the Public Safety and Neighborhood Services (PS&NS) Committee on May 5, 1999 to develop additional priority guidelines for ultimate implementation of all four levels of EMS dispatch envisioned in the EMS system design and subsequent Agreements.

The current EMS system design and the four agreements (LLC Agreement, EMS Agreement, City Agreement and Rural Agreement) with SDMSE identify four levels of dispatch priority responses. Response Priorities 1 and 3 were implemented at the start of the contracts on July 1, 1997 providing a Code response (lights and siren use while driving) for ambulance and engine for Priority 1 and a no-Code ambulance only response for Priority 3. Response Priority 2 was implemented on July 1, 1999, providing a Code ambulance response with the engine available upon request by the responding paramedic.

Another contract issue which SDMSE has requested the City consider amending is the consumer price index to which the average patient transport charges are tied. The current agreements allow for annual adjustments to the maximum average patient transport charges based on the "All-Urban Consumers - San Diego, California, as reported by the U.S. Bureau of Labor Statistics" (Section 11.6.2 of the Rural Agreement). This consumers' price index (CPI) has been used in each of the first 3 years of the current system and has resulted in a total increase of 7.2% over three years (from \$485.00 to \$520.72). SDMSE has requested that the CPI currently used be changed to a weighted average of the National All Urban Consumers (CPI-U), Medical Care Component (75%) and the Transportation Component (25%). SDMSE contends that this is a more accurate reflection of the CPI related to medical transportation and care and requests that this CPI be used effective July 1, 2001.

At this time, it is also appropriate for an annual evaluation of the EMS system. An overview of the Advanced Life Support (ALS) system will be provided as well as discussion on dispatch, new business development and the financial status of the program.

DISCUSSION

Priority 4 Response Level

The issue of an amendment to the response time for Unscheduled, Non-Emergency Priority 4 calls from 15 minutes to 25 minutes will be addressed. The Priority 4 response level has been developed by the City EMS Medical Director, Dr. James Dunford, to include calls which have been determined to require the medical care appropriate to Emergency Medical Technicians (EMTs) and a Basic Life Support (BLS) ambulance, rather than a paramedic-staffed ALS ambulance. This response level would include approximately four percent (4%) of the current 9-1-1 medical call volume. The evaluation process also incorporated recommendations of the Dispatch Advisory Task Force. This Task Force consists of dispatchers, paramedics, Battalion Chiefs, the Emergency Medical Dispatch (EMD) Quality Improvement Specialist and the

Communications Manager. This group evaluated 9-1-1 requests for medical assistance data and assisted the Medical Director with establishment of the types of calls which would be included into Priority 4 dispatch.

The last dispatch level, Priority 4, is ready for implementation at this time. This level of response includes those calls which are “Unscheduled, Non-emergency Requests.” The types of calls included in this response priority level are animal bites, sunburn, psychiatric problems and “sick person” which includes everything from boils to toothaches. A complete listing of the types of calls is included as Attachment 1 to this report. There have been 12,182 responses to these types of calls during the first three years of operation by SDMSE. Of those responses, 7,977 (65.5%) resulted in transportation to the hospital, the remainder of the responses (4,201 or 34.5%) refused care or the paramedics were unable to locate a patient upon arrival at the address.

The City of San Diego system has tracked the level of acuity of patients transported to hospitals for many years, as a result, Dr. Dunford was able to further evaluate the probability of a person’s level of actual acuity for responses to the types of calls he identified as appropriate for Priority 4. The transportation codes used in the EMS system to designate the level of care during transport to the hospital are as follows:

- Code 10 - Acute status patient. Transport to hospital in Code-3 status, with multiple ALS skills and treatment provided.
- Code 20 - Moderate status patient. Transport to the hospital in No Code status, with IV, oxygen, or medications given. ALS treatment provided.
- Code 30 - Mild status patient. Transport to the hospital in No Code status, with IV indicated, BLS treatment provided.
- Code 40 - Stable status patient. Transport to the hospital in No Code status, with only BLS treatment provided.
- Code 50 - Very stable patient. Transportation to the hospital only provided - no medical intervention required. Other transport method could have more appropriately been used (e.g. private vehicle, taxi, etc.)

The analysis completed on call types identified for Priority 4 level calls includes a review of the above transportation codes as well as the chief complaint identified by the call takers at the 9-1-1 dispatch center. Of the call types identified, 67.9% were ultimately transported to the hospital as a Code 40 or 50, 26.1% were transported Code 30 and only 6.0% were transported Code 10 or 20. These Priority 4 calls could go to any provider of Basic Life Support (BLS) medical transportation, however, the caller accesses 9-1-1 instead of calling any one of several BLS companies which could provide this level of transportation services.

The goal of the City’s 9-1-1 system is to insure the highest level of medical care and medical transportation services to the citizens of the San Diego in a fiscally efficient manner. The use of appropriate resources for the need of the patient is critical to the viability of the current EMS system. The change in Priority 4 response time will enable SDMSE to meet the non-emergency transportation needs of callers accessing the 9-1-1 system for their general transportation needs more effectively and increase the availability of ALS ambulances for life-threatening calls. The recommended change of response time criteria for Priority Level 4 dispatches (from 15 minutes to

25 minutes) will allow the City's provider, SDMSE, to maintain the highest level of service while utilizing BLS ambulances to respond to the 9-1-1 calls for Priority Level 4 calls. [In comparison, the response time used by SDMSE for their non-emergency BLS Division for calls received at the seven-digit dispatch (versus 9-1-1 dispatch) for calls that are considered Unscheduled, Non-Emergency is 30 to 60 minutes, depending on the Managed Care Organization contractor.] If there are no BLS units available to respond to a Priority Level 4 call which is received via 9-1-1, an ALS ambulance will be dispatched to ensure a timely arrival. The City EMS Medical Director, Dr. Dunford, will continue to monitor these calls to ensure appropriate resources for the need of the patient are dispatched and make changes as deemed necessary.

Consumers Price Index

The second issue is a request for the amendment of the Consumers Price Index (CPI) used to compute maximum average patient charge in the Rural Agreement from the All-Urban Consumers - San Diego, California, as reported by the U.S. Bureau of Labor Statistics to a weighted average of the National All Urban Consumers (CPI-U), Medical Care Component (75%) and the Transportation Component (25%). Section 11.6.2 (User Fee Adjustments) of the Rural Agreement between SDMSE and Rural/Metro of San Diego provides for the maximum average fee per transport to increase annually in an amount equal to the overall Consumer Price Index, All Urban Consumers (CPI-U) – San Diego, California. The CPI-U is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. The index, by definition, is a measure of the increase in price of *all* goods/services whether apples or rent purchased by the general consumer. The CPI-U is subdivided into separate "market baskets" or, rather, "components." Major components of the CPI-U include: Food and Beverages (16.3%); Housing (39.56%); Apparel (4.9%); Transportation (17.5%); Medical Care (5.6%); Recreation (6.1%); Education & Communication (5.5%); and other Goods & Services (4.3%). By utilizing a weighted average of the National Medical Care and Transportation Components of the CPI-U, SDMSE's true cost of operations will be more closely reflected based on a 75/25 weighted average of the National Medical Care and Transportation Components of the CPI-U.

Approximately 80% of SDMSE's overall operating expenses are attributed to Labor (payroll and payroll-related costs), and the Medical Care Component of the CPI-U is relevant because approximately 80% of the measure accounts for prices for medical services based primarily on increased wages for medical personnel. SDMSE is also extremely sensitive to price fluctuations for medical supplies. As the medical supply provider for all the first responders and ambulances in the EMS System, SDMSE procures over \$1 million in supplies each year, accounting for more than 6% of overall operating expenses, and the Medical Care Component, CPI –U is relevant as 20% of the measure accounts for price increase for medical supplies.

Vehicle and equipment costs (including vehicle/equipment, depreciation, tires, supplies and fuel) run approximately \$1.8 million annually, accounting for more than 11% of SDMSE's operating expenses. SDMSE's 80 vehicles log 2.1 million miles and consume nearly 180,000 gallons of fuel a year. The average price per gallon of diesel fuel has increased 35.2% since July 1997. The Transportation Component of the CPI-U will help better capture SDMSE cost of operations as it

relates specifically to vehicle and equipment price increases. A comparison chart is included as Attachment 3 to this report.

According to a 1998 survey conducted by the California Ambulance Association, SDMSE is one of the lowest charging providers in the State of California. The survey ranked the ALS Base Rates of both public and private transport providers in 56 counties throughout California, and SDMSE was ranked 96th out of 104 providers surveyed. SDMSE's ALS base rate is 28% less than the average base rate of all providers surveyed.

Current versus Proposed CPI Adjustments

Fiscal Year	Current CPI % Increase	Current Rate \$ Increase	Proposed CPI % Increase	Proposed Rate \$ Increase
1997		\$485.00		\$485.00
1998	1.7%	\$493.25	2.3%	\$496.16
1999	2.0%	\$503.11	1.9%	\$505.59
2000	3.5%	\$520.72	3.1%	\$521.26

SDMSE's goal is to maintain the high level of service quality and financial health of the City of San Diego's Emergency Medical Service (EMS) System. By allowing San Diego Medical Services Enterprise (SDMSE) to annually increase its maximum average fee per transport by a 75/25 weighted average of the National CPI-U, Medical Care Component and the CPI-U, Transportation Component, the annual increase will more appropriately reflect the costs associated with provision of medical transportation.

EMS SYSTEM OVERVIEW

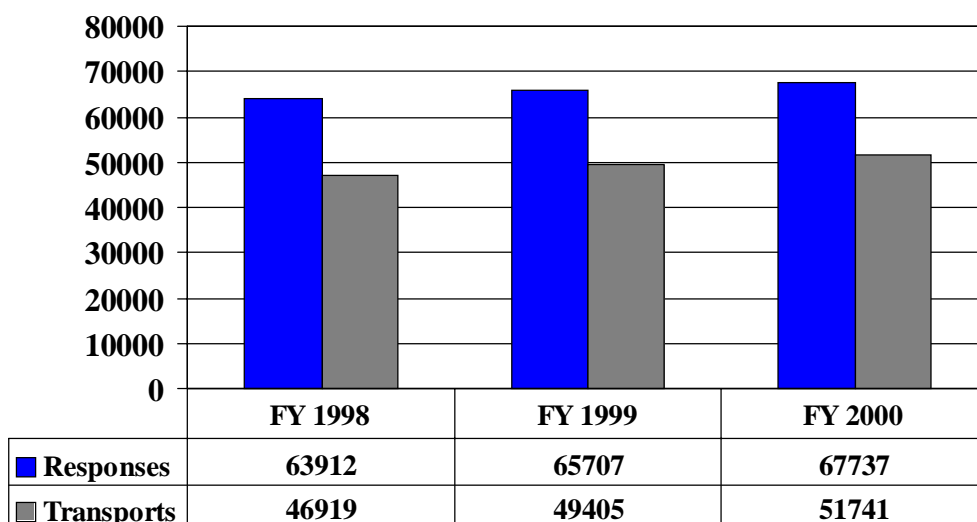
The current provider, SDMSE, has ended their third year of operations, and this report will provide an overview of the system's performance during Fiscal Year 2000 as well as significant improvements and changes which have occurred during the contract and those which are proposed for implementation. The EMS system continues to provide rapid, quality medical care and medical transportation to its citizens and visitors.

Requests for medical assistance through 9-1-1 increased 2.8% in the second year (from 63,912 in Fiscal Year 1998 to 65,707 in Fiscal Year 1999) and 3.1% during the third year (from 65,707 in Fiscal Year 1998 to 67,737 in Fiscal Year 2000). The increasing numbers of requests for assistance have required that the EMS System managers assure the system operates at its optimal level of service. In addition, continuing efforts are in place to educate the community on the

appropriate use of 9-1-1. Emergency departments in the City of San Diego continue to be utilized at or beyond capacity, and SDMSE's goal is to help people understand when to access 9-1-1 for emergencies and when to go to their own physician or urgent care center to help reduce the impacts on the existing hospital emergency departments.

SDMSE responded to 67,737 requests for medical assistance through the 9-1-1 system during this fiscal year. Of these requests, 20,116 (29.7%) responses were either canceled, the patient refused medical aid or transportation or could not be located upon arrival. A total of 51,741 patients were transported to emergency departments as a result of responses to medical calls for service. Some responses, such as traffic accidents, resulted in multiple patient transports for a single incident.

9-1-1 Requests for Medical Assistance - Fiscal Year 1998 thru 2000



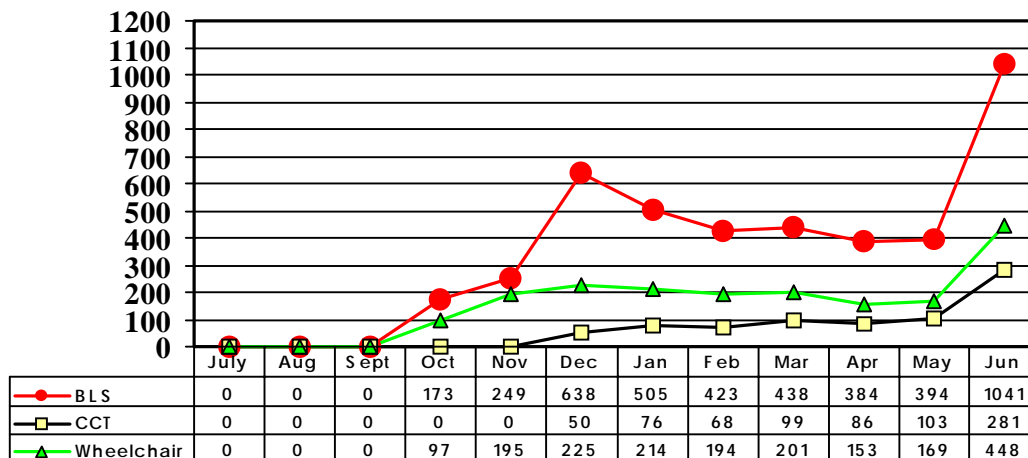
In addition to the 9-1-1 responses, during Fiscal Year 2000, SDMSE began providing general medical transportation services to the public and various medical facilities. General medical transportation services were envisioned in the original system design and the 1996 Request for Proposals (RFP). These services include Basic Life Support (BLS) non-critical interfacility transports such as moving a stable patient between a hospital or nursing home and a dialysis center; Critical Care Transports (CCT) where a registered nurse and additional equipment are required to move an unstable, or critical patient between two treatment facilities such as a hospital and cardiac catheter lab for treatments; and wheelchair transports which assist patients confined to wheelchairs but have no need for any medical intervention during transport.

The BLS and the Wheelchair Divisions started providing transports in October, 1999 and the CCT Division was up and running in mid-December. SDMSE began its first Managed Care Contract with the Palomar-Pomerado Health Care system in December, 1999 and its second with

Sharp Healthcare in June, 2000 and now is responsible for the medical transportation needs of 290,000 people in San Diego County. During FY 2000, there were a total of 5,863 combined transports. SDMSE anticipates 24,500 transports in these business lines during FY 2001.

In order to provide this expanded level of service, SDMSE has expanded the ambulance fleet to include an additional 29 vehicles which are used for the General Transportation responses. These ambulances are owned by Rural/Metro and are licensed to operate countywide in providing medical transportation services. Business licenses have been secured as required to operate in all jurisdictions.

Requests for Non-Emergency Medical Transportation July 1999 thru June 2000



RESPONSE COMPLIANCE

One of the most important elements monitored in any EMS system is the response time to requests for medical assistance. The transport ambulance response time is measured from the time the call is verified by the dispatcher to the moment the ambulance arrives at the scene of the medical aid. The First Responder response time is measured from the time of dispatch to the moment the engine arrives at the scene of the medical aid.

The current EMS Agreements set the following response criteria by a transport ambulance:

Priority 1 - Life threatening emergency: Response of a paramedic ambulance on the scene within 12 minutes and zero seconds not less than 90% of the time in each of the four zones (First Responder is also dispatched to these calls)

Priority 2 - Non-life threatening emergency: Response of a paramedic ambulance on the scene within 12 minutes and zero seconds not less than 90% of the time in each of the four zones (First Responder is dispatched to these calls if requested by ambulance paramedic)

Priority 3 - Urgent requests: Response of a paramedic or other ambulance on the scene within 15 minutes and zero seconds not less than 90% of the time in each of the four zones

Priority 4 - Unscheduled Non-emergency requests: Response of an ambulance on the scene within 15 minutes and zero seconds not less than 90% of the time in each of the four zones (This is the current requirement, however, the recommendation is that this be changed to 25 minutes).

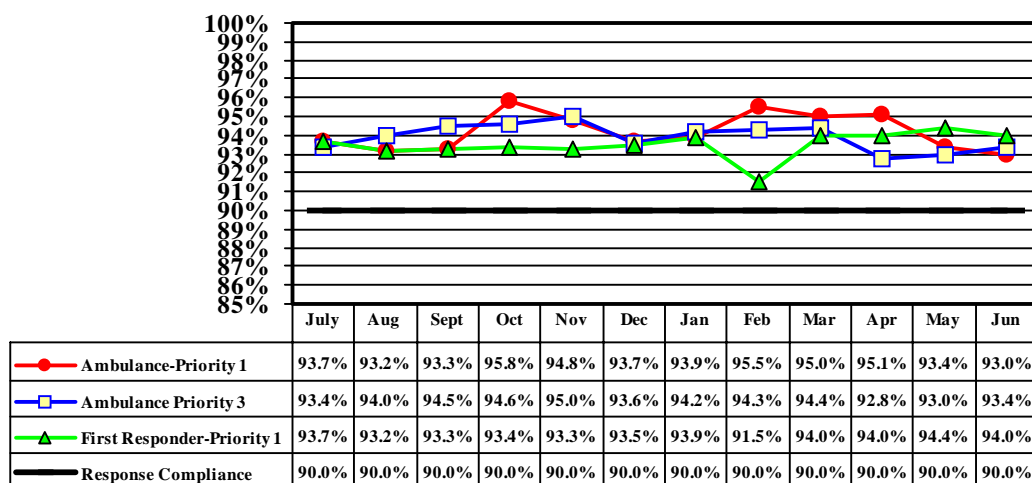
In addition to the transport ambulance response times, First Responders are also monitored for compliance as follows:

Priority 1 - Life threatening emergency: Response of a paramedic engine on the scene within 8 minutes and zero seconds not less than 90% of the time in each of the four zones

Priority 2 - Medical Alarm: Response of a paramedic engine on the scene within 8 minutes and zero seconds not less than 90% of the time in each of the four zones. This is a specialized response to medical alarm companies' requests for a "check the welfare" (ambulance is dispatched to these calls only if requested by engine paramedic)

First Responders do not respond to Priority 3 calls unless requested by the ambulance crew for assistance, such as moving a patient from a multi-story building without elevators, or other need requiring additional personnel.

RESPONSE COMPLIANCE Fiscal Year 2000



During the last twelve months of operation, SDMSE exceeded compliance requirements in all zones

for both priority responses and the Fire & Life Safety Services First Responders also exceeded compliance criteria.

Response time compliance is monitored by the EMS Program Manager in accordance with the EMS Agreements. The contract allows for exceptions to be requested by SDMSE in specific instances, such as when the system has more than twelve calls occurring at the same time. Exceptions are also granted when, in the discretion of the EMS Program Manager, the delays were caused by factors beyond the control of the provider (e.g. delayed response due to road humps or extreme weather or flooding).

In addition to the above exceptions, there are times when the ambulance arrives at the scene of the incident, but the computer does not register an “At-Scene” time, and the call results in a Not-At-Scene (“NATS”) notification on the computer aided dispatch (CAD) system. This can occur when the crew pushes the button on the Mobile Digital Terminal (MDT) to transmit the “At-Scene” message to the CAD computer three times and, because the transmission lines are busy, the time is not logged into the computer system. There are also times where the arriving EMS crew acknowledges arriving at the scene of the incident on the radio, and the MDT message is not received. In these cases, an analysis of the audio tapes is conducted and allows the actual arrival time of the unit to be properly recorded by the SDMSE Communication System Manager. The EMS Program Manager monitors all changes to the response time report initiated by the review process.

After the allowable exceptions are granted, and a thorough review is completed by the EMS Program Manager, the compliance report is prepared each month. This report is submitted to the Mayor and City Council and provides the required contract compliance figures (by zones). A copy of the final Fiscal Year 2000 report is included as Attachment 4.

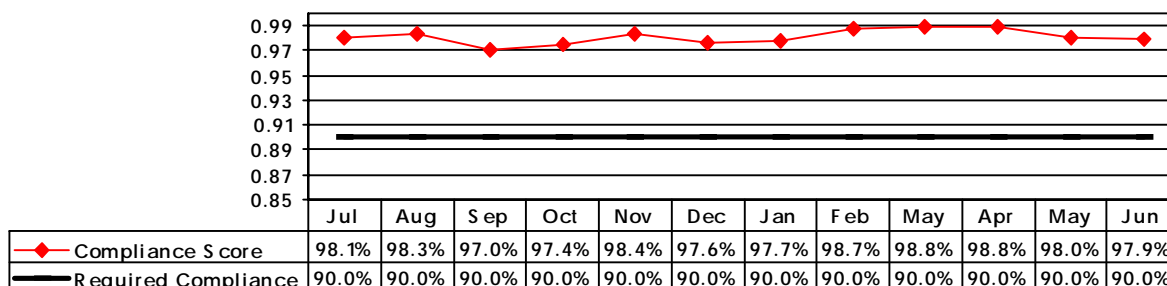
DISPATCH COMPLIANCE

The dispatch center is jointly staffed with City employees providing medical and fire call taking and dispatch, and Rural/Metro employees providing system status management, general transportation call taking and dispatch and transport compliance reporting. All staff, regardless of their employer, are certified Emergency Medical Dispatchers (EMDs) and have passed a nationally recognized training course.

The medical dispatch triage protocols approved with the new system for all 9-1-1 calls, follow nationally accredited standards created by Dr. Jeffery Clausen. Dr. Clausen is recognized across the country as an expert in emergency medical dispatch protocols. Unlike all prior providers, the accuracy of dispatchers is now monitored by a standardized review and scoring process performed by supervisors and a paramedic, Ruth Ann McGuire, from Fire and Life Safety Services. A total of 3% of all calls are randomly selected for review and 100% of all CPR calls are also reviewed. This review process measures the call taker’s accuracy in compliance with following protocol questions and providing pre-arrival instructions.

The State of California recently recognized the Fire Communications Center for an excellent job of handling 9-1-1 calls. This recognition was for excellence in the response time of answering the calls as well as the length of time taken to handle calls and dispatch units.

Percentage of Compliance



National Academy of Emergency Dispatch Accreditation

The Fire Communications Center has been accredited by the National Academy of Emergency Medical Dispatch since August 25, 1998. This accreditation is a reflection of the quality and dedication of the personnel from Fire and Life Safety, Rural/Metro and the City EMS Medical Director. Fire Communications Center became the second Accredited center in California and the 27th in the world. The Fire Communications staff, the clinical quality assurance staff and the dispatchers have all worked very hard and faced many challenges while attaining this award of excellence. In order to maintain the accreditation, Fire Communications staff must maintain a compliance rating of 95% or above.

CONTINUOUS QUALITY IMPROVEMENT MONITORING

The current EMS system has an extensive continuous quality improvement (CQI) program in place. A total of six committees and multiple specialty teams comprised of EMS personnel such as EMT's, single-role Paramedics, fire fighter/paramedics, nurses, physicians and managers from Fire and Life Safety Services and Rural/Metro monitor the clinical quality of the system as well as dispatch and education monitoring. Each committee concentrates on various portions of the EMS system looking for ways to make improvements in the system and monitoring skill and compliance with policies, protocols and clinical scope of practice.

Fire and Life Safety Services employs a full-time registered nurse, Ms. Ginger Ochs, to provide medical chart review of all 9-1-1 calls and to coordinate with the base and satellite hospitals to ensure clinical quality, and Mr. Roger Fisher to provide clinical education to personnel. During this fiscal year, Rural/Metro hired a full-time registered nurse, to provide medical chart review of all general transport calls, to coordinate with hospitals and ensure the clinical quality of BLS, CCT and Wheelchair transports.

In addition to the internal CQI provided by Ms. Ochs, Dr. Dunford, and Mr. Fisher, as well as the EMS staff from Fire and Life Safety Services, the hospitals designated by the County as Base Hospitals provide independent clinical oversight and monitoring. Each Base Hospital designates a Base Nurse Coordinator responsible for identifying any clinical issue that requires additional monitoring, investigation or education. This oversight is entirely independent of the City of San Diego EMS system, and any issues identified by the staff of the City EMS system or any Base Nurse are thoroughly investigated by the Base Nurse. When requested by the Base Nurse, the County EMS staff can also be included in any inquiry that may result in action which impacts any EMT or paramedic's state certification. Finally, Dr. Dunford and Ms. Ochs represent the City on county-wide EMS committees such as the Pre-Hospital Advisory Committee (PAC) and the Base Station Physicians' Committee (BSPC) and participate fully in the overall integration of the County EMS CQI program.

Another improvement for documentation is through an electronic data collection beta test which SDMSE will be initiating in October, 2000. SDMSE has worked and continues to work closely with San Diego County EMS technical staff in the development of this project. This test system utilizes a handheld device, the Palm Pilot IIIxe, to electronically gather patient care information in the field setting. Currently, crews document prehospital patient records (PPR) on paper Scantron forms which are first scanned by EMS staff and checked for completeness, then forwarded to the County for final storage. Operationally, the electronic gathering of data may speed prehospital charting, which in turn may improve unit return to service times. Future benefits can also include electronic transfer of billing information, as well as electronic tracking of reusable and non-reusable equipment via the handheld device.

The County of San Diego Local EMS authority has had electronic gathering of prehospital patient information for several years via the "Quality Assurance Network" or "QANet." SDMSE intends to migrate to an electronic data gathering strategy, which will satisfy the quality assurance needs of both the County EMS QANet as well as SDMSE's internal quality improvement, training and operational needs.

The result of this interface compatibility challenge is that medical records with patient data cannot be electronically accessed for research, quality assurance or clinical oversight. It must be done by hand search of paperwork. This process is very time consuming and sometimes inadequate for the needs of the clinical oversight staff and the City EMS Medical Director. Currently the County EMS computer system has no ability to have information downloaded, only entered on a "live" basis. SDMSE managers must continue to take the lead in working with the County EMS staff to identify a solution for electronic data collection that is acceptable and implementable.

FINANCIAL OVERVIEW

The preliminary year-end reports for Fiscal Year 2000 for Fire and Life Safety Services's and Rural/Metro's Combined Statement of Operations for SDMSE is included with this report as Attachment "3."

At the end of the third year, preliminary data shows that there is a “net margin” of \$1,997,460 and the Statement of Operations shows a “Distribution to Partners” of \$988,730 each. This amount is accounts receivable, therefore, it cannot be appropriated for expenditure or “distributed” until collected.

The following preliminary revenue and expense summary information for Fiscal Year 2000 provided to the City EMS Program Manager by SDMSE financial staff provides an overview of the system’s financial status at the end of the third year. It is important to note that this data is preliminary and final year-end status will be determined through the audit process which will be conducted soon.

REVENUE

Gross Ambulance fees billed	\$29,438,723
Less: Medicaid allowances	(4,323,927)
Medicare allowances	(996,053)
Discounts	(748,764)
Bad Debt	(6,941,897)
Airport Contract	580,170
Managed Care Contracts	915,047
ATS Revenue	59,590
Standby Revenue	62,119
Interest Income	60,586
Subsidy	<u>650,000</u>
TOTAL REVENUE*	\$25,697,495

EXPENSES

Vehicle Leases	\$ 324,000
Operational Supplies	1,056,437
Medical Director Fees	96,737
Clinical Upgrade	49,911
Bank Fees	14,621
Capitated Payments to Other Providers	620,000
Reimbursement to City Fire	4,193,845
Reimbursement to Rural/Metro	9,500,732
Billing Costs	<u>921,855</u>
TOTAL EXPENSES	\$23,720,035

TOTAL NET MARGIN*	\$ 1,977,460
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* Total reflects \$2.15 million in anticipated revenues which have not yet been collected.

The contract provides for Rural/Metro to advance cash to SDMSE if the cash flow of the operation is not sufficient to meet operating needs. During the third year of operation, there were no draws against the letter of credit.

The City Auditor's staff, in conjunction with the EMS Program Manager and SDMSE's financial staff, have worked to define the reporting structures required for financial oversight of SDMSE. The City of San Diego provided the contract subsidy payment of \$650,000 to SDMSE. SDMSE provided payments totaling \$324,000 to the City in FY 2000 for semi-annual master lease payment for ambulances and monthly compensation of \$1.55 per transport for medical direction provided by the City EMS Medical Director. Other recoverable costs including fuel costs and General Fund expenditures for staffing and miscellaneous charges, as well as all first responder medical supplies and equipment.

Included in the Fire and Life Safety Services's budget is the provision of .25 Accountant II position in the City Auditor's Office. This position is responsible for the continual review of the financial documents provided by SDMSE, monthly expenditure reimbursement requests, and projections for budget impacts. In addition to the Accountant position costs which are reimbursed from SDMSE, beginning in FY2001, there will be reimbursement to the General Fund for .50 Associate Management Analyst position which is budgeted in the EMS Program. This position is responsible for coordination and oversight of all subpoenas, claims, and litigation received by the City as a result of SDMSE operations. This position will provide essential support to protect the City's interest while working with the City Risk Management Department and City Attorney's Office staff in a coordinated effort.

SDMSE is providing capital funding and expended approximately \$235,000 in permanent facility upgrades and equipment purchases over the past three years. This includes facility room additions at Fire Stations 32 (Paradise Hills) and 36 (Clairemont), grounds improvements, electrical upgrades and repair equipment that is shared with Fire Repair Facility, security systems including video monitoring of SDMSE and Fire Stores Facilities.

During FY 2001 SDMSE has budgeted \$110,000 for the construction of a dormitory and bathroom addition to Fire Station 39 (Tierrasanta) and to design and develop construction documents for a 1,800 square foot room addition to Fire Communications. SDMSE plans to provide construction funding for the Fire Communications Center addition, estimated at \$500,000, in FY 2001 or 2002.

BILLING AND COLLECTIONS

The billing and collection operations are provided by Rural/Metro and utilize state-of-the-art computer systems and well-trained personnel to maximize collection of revenues due SDMSE. The average charge for each transport during Fiscal Year 2000 was \$505.04 which is in compliance with the contract. The contract requires that the maximum average charge not exceed \$503.11 during the third year. The amount of the adjustment for the period ending June 30, 2000 is 3.5%, bringing the maximum average charge per transport to \$520.72 for the twelve-month period beginning on July 1, 2000.

Patient invoice totals for the third year of operations (July 1, 1999 through June 30, 2000) are \$29,438,723 for medical transportation and ALS level patient assessments without transport. This amount is \$2,938,576 above original budget projections for revenues in Fiscal Year 2000. Accounts receivable total \$9,755,041 of current and aged gross patient revenues at the end of June, 2000. This figure includes bad debt and discounts applied to designated transports. Rural/Metro staff anticipates that collections will increase during the next fiscal year thereby increasing the revenues collected. At this time, the estimated collection rate is 57%. This rate is 6.5% above the rates from the first year of the contract.

VEHICLE AND SUPPLY

The ambulances now have an established preventive maintenance program and are inspected on a routine basis. There have been an average of 32 ALS ambulances and 12 BLS ambulances available for service each day. The fleet currently consists of 37 ALS ambulances, 15 BLS ambulances and 11 Wheelchair Vans. An average of three vehicles per day are removed from service for preventative and scheduled maintenance.

The mechanical repair of ambulances is accomplished at Fire Repair Center, and a system of inspections and preventive maintenance service is in place. During FY2000, a split shift format was created to provide more hours per day where an ambulance mechanic was on duty. This change also allows preventive maintenance to be completed on vehicles during the non-peak hours of 9-1-1 responses. The current Rural/Metro fleet positions are: 1.0 Manager, 1.0 parts clerk and 4.0 vehicle technicians.

During the third year of the program, approximately 2.1 million miles have been added to the ambulance fleet. There have been 28 reports of minor damage to the vehicles and 6 reports of damage to other vehicles through traffic accidents. Six of the reported accidents occurred during "Code 3" emergency responses when the vehicles are traveling with lights and sirens on.

Supply purchase and distribution is a key element in the provision of EMS services. Inventory on ambulances and engines has been standardized, resupply procedures have been established and other policies are in place to meet operational demands. All orders (100%) for resupply are delivered to stations no later than 6:00 p.m. on the same day if they are submitted by the stations prior to 10:00 each morning. It is anticipated that Rural/Metro may move to a split shift configuration during the next fiscal year to ensure prompt delivery of supplies. Supply distribution is currently on a seven day per week, nine hour per day schedule. There are now three courier delivery vans available for supply distribution and other delivery needs. Rural/Metro is also doing research to enable purchases to be completed via the internet to further expedite the process.

Outside vendor contracts are in place for maintenance, service and repair of durable equipment such as gurneys, defibrillators and blood pressure cuffs. The oxygen refilling process is now under contract, rather than handled internally, due to safety concerns of station crews. A

biohazardous and medical waste handling and disposal program has been implemented with a company that was able to significantly reduce the in-house cost of this required program.

Policies and procedures aimed at improving recovery of durable supplies from hospitals, monitor rotation of drugs and medical supplies and other supply issues are constantly being reviewed and improved.

COMMUNITY EDUCATION

The EMS agreement requires that SDMSE provide community education on the EMS system a minimum of 100 hours per year. Between July, 1999 and June, 2000, SDMSE has provided 656 hours of public service EMS education and donated ambulance stand-by for civic events. Events such as the Qualcomm Kids' Day, Somali Flu Clinic, Career Day at Caesar Chavez School, Clairemont High "Every 15 Minutes" Program, City Fest, Logan Heights Head Start, and presentations to hundreds of senior citizens at Fall Prevention Clinics at various senior centers are examples of public service education provided by SDMSE. SDMSE also participated extensively in promoting EMS Week in San Diego through the Padres, the Health Fairs at the Concourse and UCSD and CPR Training.

The community education aspect of this system has been significantly improved with the addition of a Public Information Officer (PIO), Ms. Karen Dalton, provided by Rural/Metro. Ms. Dalton, along with existing Fire & Life Safety Services PIOs, Ms. Leslie Halik and Firefighter/ Paramedic Dean Cherry, are developing some extensive public information programs. These include a "Safe Kids" campaign, presented in conjunction with the City Schools, intended to educate students on street crossing safety to reduce pedestrian accidents; an outreach 9-1-1 education program to improve the information they provide when they contact 9-1-1 for their guests.

SUMMARY

The new EMS system design has provided the City with improved EMS delivery of services to the citizens and guests of San Diego. Highlights of the system include:

- The transport provider, SDMSE, has provided ambulance response times which exceed the required compliance levels (90% in 12 minutes or less) for Priority 1 level responses. SDMSE has attained an average compliance of 94.5% during Fiscal Year 2000.
- Fire and Life Safety Services First Responder paramedics have met the challenges of increased patient care and coordination of services with the transport ambulances while exceeding their response time requirements (90% in 8 minutes or less). First Responders attained an average response time during Fiscal Year 2000 of 93.5%.
- The 9-1-1 call takers are measured monthly on adherence to established protocols. A compliance rate of 95% is required by the National Academy of Emergency Medical Dispatch to sustain the Quality Dispatch Center rating. Fire dispatchers have averaged a 98.1% compliance rating during Fiscal Year 2000.

- The 9-1-1 dispatcher staffing level at the Fire Communications Center is currently up to required levels and Rural/Metro opened a separate dispatch center to handle the BLS and other general transportation needs of Managed Care Organizations and the public.

The EMS system continues to be monitored for compliance with contract requirements by the EMS Program Manager and on all clinical levels by the City Medical Director and the Quality Improvement staff of Fire and Rural/Metro. The nurses and physicians receiving patients at hospitals and on a response service level by citizens requesting service are another measurement of the quality of the service being provided.

SDMSE and Fire and Life Safety Services have formulated their budgets for Fiscal Year 2001, and these budgets reflect projections for revenues and expenditures for the system. During this fiscal year, SDMSE will expand the provision of interfacility transportation for non-emergency patients. These general transports are those which are generally scheduled in advance and move patients to and from hospitals, dialysis centers, homes, skilled nursing facilities and other similar facilities. There is a complete BLS Division of Rural/Metro crews providing this increase service level with some Rural/Metro ALS crews providing this level of medical transportation during slow times of the 9-1-1 system. The ALS crews discontinue general transportation services if the 9-1-1 emergency system has less than six units available for response. The inclusion of this type of transportation services was envisioned in the original EMS design, and it is projected that SDMSE will continue to increase contracts with Managed Care facilities during the upcoming year.

During the first three years of operation, 75 single role paramedics from the City and Rural/Metro have been cross-trained as fire fighters. A total of 52 of these paramedics were transferred from SDMSE into the General Fund side of Fire and Life Safety Services, attaining permanent status as City fire fighter/paramedics. Another 23 have received the cross-training and continue to work on the transport side of SDMSE and have the opportunity to interview for permanent, full-time General Fund positions when they are open. This change provides the opportunity for fire fighter/paramedics to rotate from the engines onto the ambulances to improve their medical skills and provide the individuals on the ambulances to rotate onto an engine to maintain their fire fighting skills. There will continue to be a need for single-role paramedics on ambulances.

There are growing opportunities for recruitment on the Rural/Metro side of SDMSE for single-role EMT's to support the non-emergency transportation business. These individuals have the opportunity to move into the 9-1-1 side of business as openings occur and if qualified on the fire recruit list, have the opportunity to interview to move into the fire fighter career path as well as training to become a paramedic.

Fire and Life Safety Services and Rural/Metro are working with the Miramar Community College District and fire fighter groups such as Brother's United and Bomberos to recruit a diverse workforce into the medical transportation arena through an outreach program into the high school. A special training and education program is being established with SDMSE providing scholarships for some attendees as well as assistance for graduates in securing employment either with Rural/Metro or other BLS companies in San Diego.

The City Medical Director continues to monitor the system for compliance with clinical quality standards. When any area is identified through the review process which indicates the EMS system will be enhanced through education, revisions to policies or protocols or other methods of changes in operations, the staff from SDMSE and Fire and Life Safety Services are receptive to implement the recommendations. The City EMS system has worked with County EMS on piloting innovative prehospital levels of paramedic service to improve the quality of care to citizens. Once such program, Rapid Sequence Intubation (RSI), was developed by the County Medical Director and has proven to improve patient outcomes in patients with severe head injuries resulting from trauma. These programs are not funded by County EMS for the increased costs of supplies, drugs and equipment, however, SDMSE has a commitment to improving patient care and has fully participated.

Financially, the system is self-sustaining, however constant evaluation and appropriate use of resources is required to ensure a continued level of return on investments. Since the inception of SDMSE, the City of San Diego has realized a return of profit of just over \$3.2 million. In addition to increasing revenues and improved collection rates, SDMSE has not drawn on the line of credit for operating expenses during the third year of operation.

Budgeted Expenditures of Profits (City Portion)

Fiscal Year 2000

8.76 Dispatchers	\$422,885
1.00 Administrative Aide	\$ 51,261
13.3 Emergency Medical Technicians (Mid Year adds)	\$245,969
ADAM Software	\$ 83,000
Specialty Pay for Non Posted Paramedics	\$100,000

<i>TOTAL</i>	\$903,115
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Fiscal Year 2001

1.00 Administrative Aide	\$ 54,855
13.3 Emergency Medical Technicians	\$388,551
9.9 Fire Fighter/Paramedic	\$916,898
Fire Fighter/Paramedic Differential	\$ 89,655
Specialty Pay for Non Posted Paramedics	\$184,480

<i>TOTAL</i>	\$1,634,439
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As a result of the anticipated decreases in Medicare reimbursements beginning January 2001, it is uncertain if SDMSE will be able to sustain the current cash flows, and this has been incorporated into revenue projections. Due to Medicare reimbursement changes required by the Negotiated Rule Making process through the Health Care Financing Administration (HCFA), SDMSE will lose a minimum of \$750,000 in revenue annually at the full implementation of the reimbursement changes in Fiscal Year 2004. The new schedule is to be phased in over a four-year period

beginning mid year. The Fiscal Year 2001 budget was developed using “worse case” scenarios since the full impact of the new Medicare Fee Schedule will not be known for several more months.

The managers and employees of Fire and Life Safety Services and Rural/Metro, as well as representatives from Local 145, show consistent efforts to continually improve the system and service provided and make adjustments where necessary.

ALTERNATIVES:

1. Do not accept the recommendations of the City EMS Medical Director and implement the changed response time for Priority 4 Dispatch from 15 to 25 minutes. This is not recommended because fiscal viability of the EMS system requires appropriate resource allocation. Failure to distribute these calls to a BLS dispatch will cause increasing impacts on ALS resources and require increased subsidies to add ALS resources or result in potentially longer response times to life-threatening responses due to over use on non-emergency calls.
2. Do not accept the requested change in measurement of the CPI from the All-Urban Consumers - San Diego, California, as reported by the U.S. Bureau of Labor Statistics to a weighted average of the National All Urban Consumers (CPI-U), Medical Care Component (75%) and the Transportation Component (25%). This is not recommended as a change to the weighted average provides a more effective reflection of the changing medical care costs as well as unfunded federal mandates is required to sustain EMS system viability.

Respectfully submitted,

Patricia H. Nuñez
EMS Program Manager
Emergency Medical Services Program

Approved: Patricia T. Frazier
Deputy City Manager

NUÑEZ/PN

- Attachments:
1. Spreadsheet of Priority 4 Level Responses and Outcomes
 2. Comparison Chart of Current CPI vs. Proposed CPI
 3. Combined Statement of Operations for SDMSE - FY 2000
 4. Compliance Report